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ARCHITECTURE
FOR SCIENCE

Rodgers Builders
General Contractors

Time to Market:

How to Build 30,000 SF of R & D space in 180 days... and live to tell about it...

Jeffrey Schantz AIA
Lord Aeck & Sargent

Geoff Grisham, VP Finance
AlphaVax Human Vaccines

Skip Hildebrand
Rodgers Builders



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Project Goals

- New State of the Art R & D Lab for virology research
- Identify, procure and outfit new lab before existing lease expires in May 2001
- Preserve capital
- Create a safe, pleasant environment for Life Sciences Research



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Resources and Opportunities

- RDU /RTP location
- Access to experienced Contractors
- Experienced management team
- Acceptable risk profile
- Flexible decision makers
- Access to capital



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Challenges

- Find an existing building with a competitive lease rate
- Need for B L -3 containment lab
- Lower acquisition and fit up costs
- Meet the schedule
- Define the facility requirements
- Lower operating and energy costs



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Project Team

PROJECT MANAGEMENT

GEOFF GRISHAM
ALPHAVAX
Owners Representative

LARRY LORD AIA
LORD AECK SARGENT
Principal in Charge

JEFFREY SCHANTZ, AIA
LORD AECK SARGENT
Principal Architect

SKIP HILDEBRAND AIA
RODGERS BUILDERS
Construction Manager

COST ESTIMATING
RODGERS BUILDERS

MANAGEMENT

LABORATORY PLANNING

JEFFREY SCHANTZ AIA
LORD AECK SARGENT
Laboratory Architect

CLARK RICHARDSON & BISKUP

LABORATORY CASEWORK
NYCOM, INC./FISHER HAMILTON

ARCHITECTURE & DESIGN

BEN ELLIOT, AIA
LORD AECK SARGENT
Project Architect

INTERIOR DESIGN

MEGAN PARHAM
LORD AECK SARGENT
Interior Design

DESIGN

M / E / P ENGINEERING

NEWCOMB & BOYD
Chris Rousseau, PE
Andrew Dymek, PE

HVAC DESIGN/BUILD

NEWCOMB & COMPANY
Raleigh, NC

ELECTRICAL DESIGN/BUILD

STARRELECTRIC
Raleigh, NC

PLUMBING DESIGN/BUILD

TRIANGLE PLUMBING
Cary, NC

ENGINEERING



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Schedule Approach

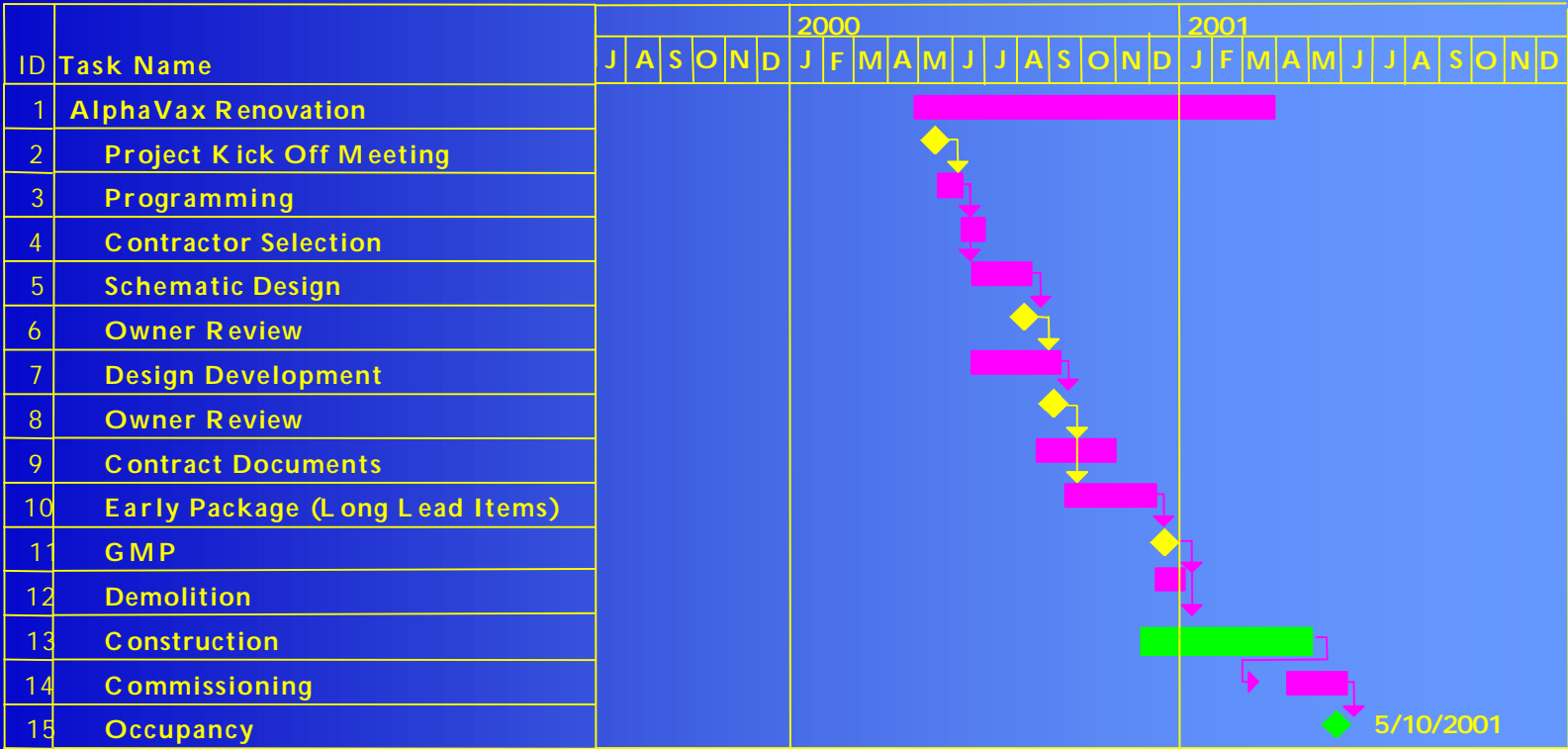
- No Excuses!
- Early Packages for Permits, Demolition
- Close Cooperation with Building Inspections
- Early Order for Lead Time Items:
 - Air Handler
 - Chiller
 - Boilers
 - Emergency Generators
- Begin Commissioning before project close out



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Project Schedule





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Finance Approach

- Construction Loan: ¼ point below Prime
- Furnishings: Leased
- Equipment: Leased
- Negotiation: Direct with Owner
- Fees: Owner Cost



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Lease Terms

- Term: 5 years
- Renewal: 3 5-year extensions
- Rental Rate: \$11/SF Base Rate Triple Net
- Escalation: 3%
- Security: \$50,000



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Design Approach

- Total project delivery
- Extensive Programming effort
- Integrated Design Team
- Lab Planning integrated
- Interior Design integrated
- Construction Manager on board for Design



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Engineering Approach

- M /E /P systems performance specified by Engineering Team
- Design/Build by sub-contracting team
- Inspection by Engineering Team
- Test and Balance by sub-contractor
- Early start to Commissioning process
- Final close out by Commissioning Agent
- Hire on Facilities Manager during close out



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Energy Approach

- Provide the most energy efficient systems available to within schedule constraints
- Lowest First Cost/Operating cost
 - Constant Volume System
 - Two Cycle/Night Set Back
 - Air Cooled Electric Chiller
 - Gas Boiler
 - Minimize Fume Hoods
 - Use Type II/A BioSafety Cabinets where practical
- Minimal Site Impact



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Construction Delivery Options

- Design-Bid-Build
- CM Advisor (Modified CM)
- Professional Procurement
- CM Bid
- CM Negotiated GMP
- CM Negotiated, Cost Plus
with GMP (AIA 111)
- Design – Build



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Construction Approach

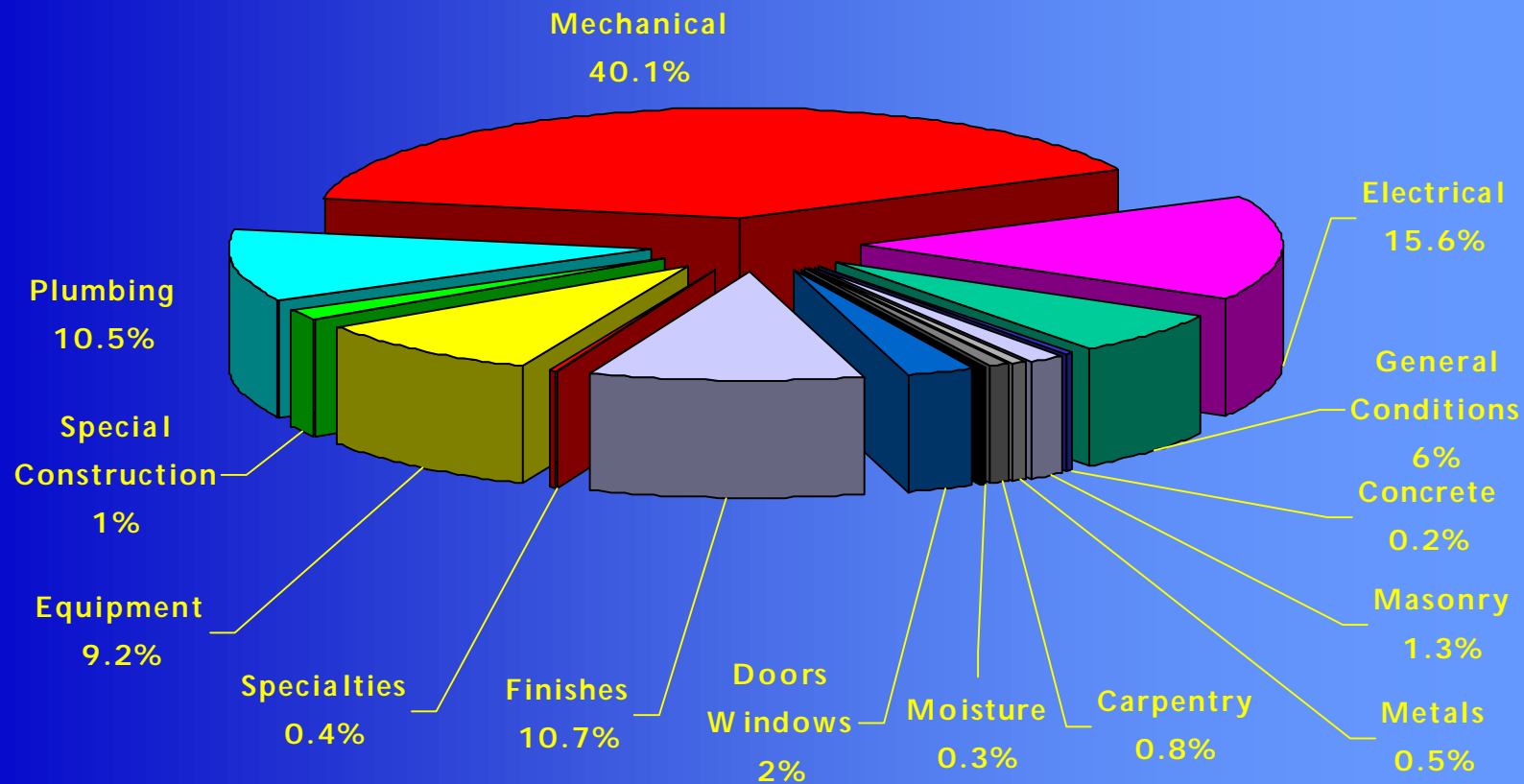
- Construction Manager
- Negotiated Contract, Cost plus Fees
 - General Conditions
 - Construction Management
 - Pre-design/ Estimating
- Guaranteed Maximum Price
- Pre-Qualification of all Sub-Contractors
- Open Book pricing
- AIA – 111 with AIA – 201 General Conditions



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Construction Costs



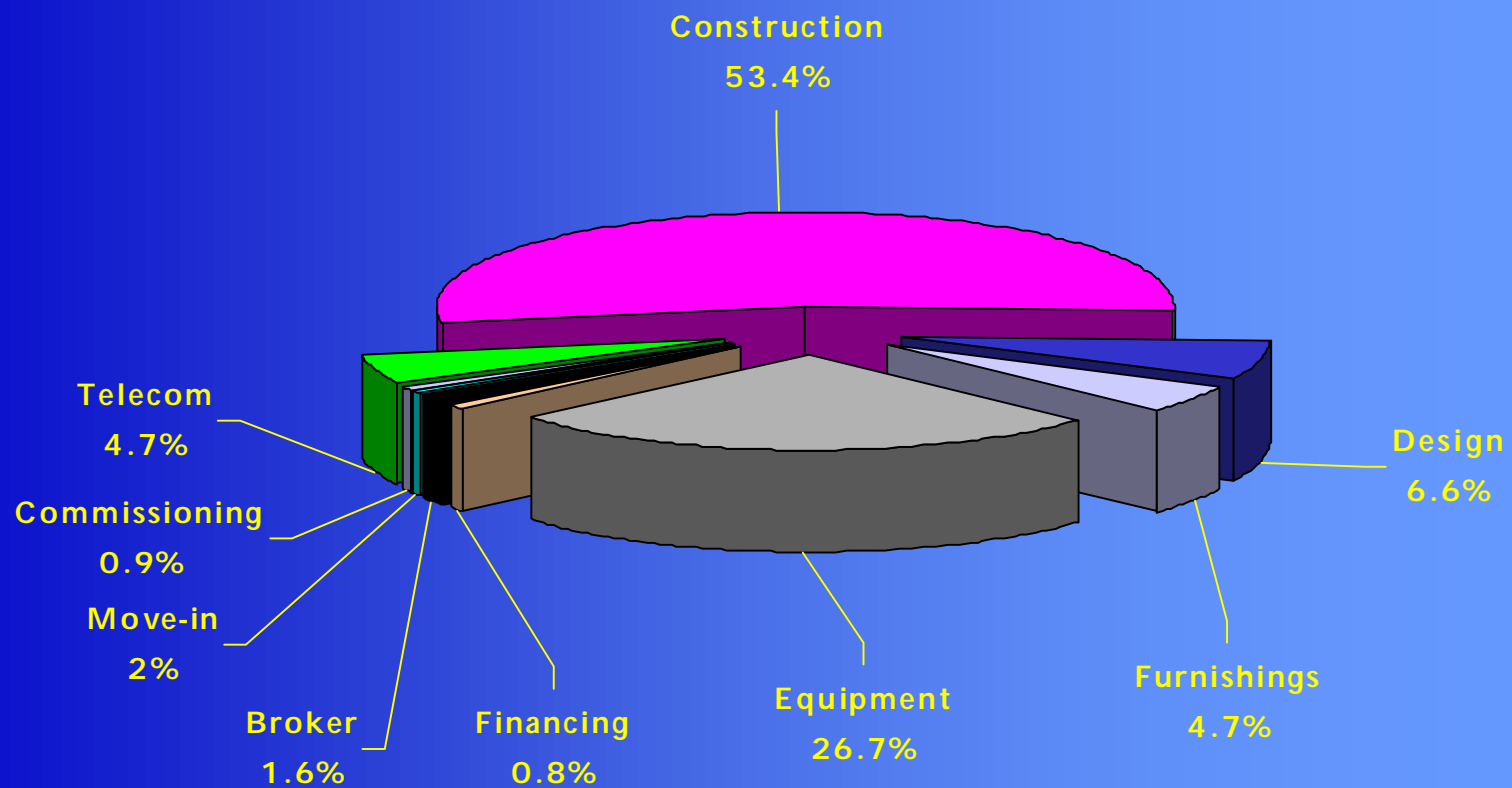
Total Construction Cost: \$3,400,117



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Project Costs



Total Project Cost: \$6,368,117



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Lessons Learned

- Only Professionals should order Autoclaves
- Keep an eye on Utility issues
- Select the best Sub-Contractors



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Q & A